Joseph Smith

Instructor's Name

ENGL 1013

Date

NASCAR Safety

The National Association of Stock Car Auto Racing, also known as NASCAR, has vastly evolved from its humble beginnings. Stock car racing started from moonshiners racing on the weekends and making liquor runs during the week. Then Bill France, Sr. had a vision for the sport of racing and organized NASCAR. With the advancement of technology, stock cars became faster and deadlier. This technology used on stock cars increased horsepower and torque; consequently, this increase changed racing forever because the safety regulations were changed to include a restrictor plate, HANS device, and a new safety barrier.

The fastest speed every recorded on a NASCAR circuit topped 212 miles per hour by Bill Elliott in 1987 at Talladega during qualifying. When race day came, on lap twenty-two, Bobby Allison took flight in his Buick because when a stock car travels over two hundred miles an hour, air flows underneath the car, causing the tires to come off the ground. NASCAR officials stepped in and implemented the restrictor plate in the 1992 season for Talladega and Daytona. A restrictor plate bolts underneath the carburetor on the engine, restricting the flow of gas into the engine. The restrictor plate decreases the horsepower of a stock car from about 750 to about 400 horsepower. The restrictor plate also decreases the top speed of the car by thirty miles an hour. NASCAR solved the problem of being too fast, but they created another problem.

The implementation of the restrictor plate changed racing because the use of the restrictor plates makes every car almost equal. The restrictor plate takes the control out of the driver's

hands. Drivers now have to work harder than ever before to pass and stay ahead in the pack. This causes cars to bunch up and create packs, which creates more wrecks. When cars bunch up into a pack, the engines must work harder to maintain power. When they reach their maximum capacity, they lose engine power, causing the car to fall back in position. Passing becomes a challenge of pushing the engine to its limits without exceeding its capability because when a car loses its power and capability, drivers lose control and cause wrecks. Despite the fact that restrictor plate races show to have more wrecks than non-restrictor plate races, NASCAR calls the restrictor plate a necessary evil. Without the plate, cars become too dangerous. In 2000, Rusty Wallace took a test car that did not have a restrictor plate to Talladega and described the car as a loose cannon. Without the restrictor plate, Wallace had no control over the car.

Technology has advanced past the need for a restrictor plate. Because the Daytona 500 creates a tension which causes all drivers to want to win the biggest race of the year, drivers began to gain speed again and find ways to create more horsepower while still having the restrictor plate installed on the cars. Then when Dale Earnhardt, Sr. wrecked on the final lap and lost his life in 2001, NASCAR once again changed the rules for drivers when they mandated that all cars must implement a head and neck support device, the HANS device. This helps limit the head and neck injuries which Earnhardt suffered from his fatal crash because the HANS device limits the forward motion of the head and neck, putting the forehead in compression. When Earnhardt died, the forty-three drivers on the track had the HANS device available to them, but NASCAR had not made it mandatory to use one. Earnhardt believed in the old-school ways and did not wear the HANS device. NASCAR made the HANS device mandatory in October of 2001, and since the implementation of the HANS device rule, the number of fatal wrecks has decreased.

After Earnhardt's death, other safety devices have come to NASCAR's attention. NASCAR addressed the need for a wall softer than concrete to reduce the impact from the high-speed cars because concrete walls have too much kinetic energy for the car to be stopped all at once. Since stopping distance and velocity determine the force of impact on the driver, NASCAR implemented SAFER Barriers, or Steel and Foam Energy Reduction Barriers. This soft wall absorbs some of the energy from high-speed impacts and dissipates the energy on a longer portion of the wall. The SAFER Barrier reduces the impact the car and driver take directly.

The advancement of technology cannot be hindered, and neither will the need for speed. The increase of speed brought with it the increase of safety regulations in modifications done to the cars themselves, in required equipment for the drivers, and in changes in the barrier wall. The first of several major safety precautions implemented that changed racing forever was the restrictor plate. As a result, wrecks became catastrophic, and that brought the HANS device into consideration. The Steel and Foam Energy Reduction Barriers were also implemented to reduce the impact to the wall. All three of these safety devices happen to be the child of increased speed. Stock cars had no need for restrictor plates until they reached speeds of two hundred miles an hour. The HANS device and SAFER Barriers were not necessary until the force of impact and top steed increased in stock cars. Consequently, NASCAR regulations have changed stock car racing forever as an effect of high-speed racing.